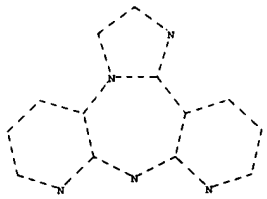
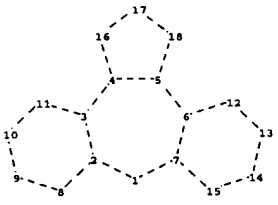
C:\Program Files\Stnexp\Queries\10662606.str





ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
ring bonds :
1-2 1-7 2-3 2-8 3-4 3-11 4-5 4-16 5-6 5-18 6-7 6-12 7-15 8-9 9-10 10-11
12-13 13-14 14-15 16-17 17-18
exact/norm bonds :
1-2 1-7 2-3 2-8 3-4 3-11 4-5 4-16 5-6 5-18 6-7 6-12 7-15 8-9 9-10 10-11
12-13 13-14 14-15 16-17 17-18

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom
12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom

10/662,606

```
=> D HIS

     (FILE 'HOME' ENTERED AT 18:42:44 ON 23 AUG 2005)

     FILE 'REGISTRY' ENTERED AT 18:43:09 ON 23 AUG 2005
L1              STRUCTURE UPLOADED
L2            3 S L1
L3           52 S L1 SSS FUL

     FILE 'CAPLUS' ENTERED AT 18:43:51 ON 23 AUG 2005
L4            9 S L3

=> D L1
L1 HAS NO ANSWERS
L1              STR
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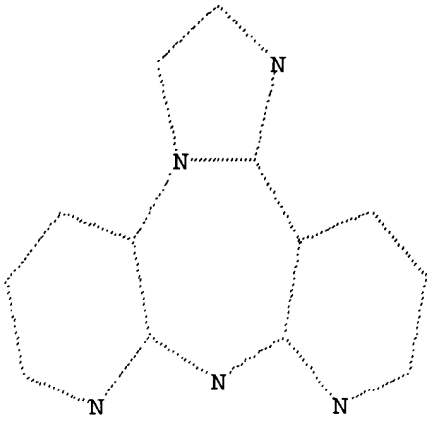

Structure attributes must be viewed using STN Express query preparation.

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=> d ibib abs hitstr total
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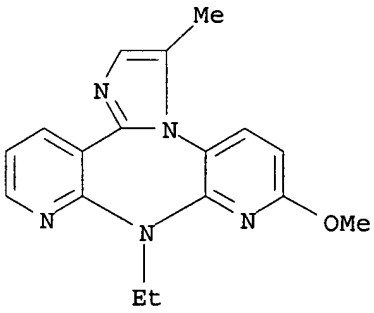
L4 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:159131 CAPLUS
DOCUMENT NUMBER: 142:348216
TITLE: Hierarchical Database Screenings for HIV-1 Reverse Transcriptase Using a Pharmacophore Model, Rigid Docking, Solvation Docking, and MM-PB/SA
AUTHOR(S): Wang, Junmei; Kang, Xinshan; Kuntz, Irwin D.; Kollman, Peter A.
CORPORATE SOURCE: Encysive Pharmaceuticals Inc., Houston, TX, 77030, USA
SOURCE: Journal of Medicinal Chemistry (2005), 48(7), 2432-2444
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In this work, an efficient strategy was presented to search drug leads for human immunodeficiency virus type 1 reverse transcriptase (HIV-1 RT) using hierarchical database screenings, which included a pharmacophore model, multiple-conformation rigid docking, solvation docking, and mol. mechanics-Poisson-Boltzmann/surface area (MM-PB/SA) sequentially. Encouraging results were achieved in searching a refined available chemical directory (ACD) database: the enrichment factor after the first three filters was estimated to be 25-fold; the hit rate for all the four filters was predicted to be 41% in a control test using 37 known HIV-1 non-nucleoside reverse transcriptase inhibitors; 10 out of 30 promising solvation-docking hits had MM-PB/SA binding free energies better than -6.8 kcal/mol and the best one, HIT15, had -17.0 kcal/mol. In conclusion, the hierarchical multiple-filter database searching strategy is an attractive strategy in drug lead exploration.

IT **146656-78-2**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hierarchical database screenings for HIV-1 reverse transcriptase using pharmacophore model, rigid docking, solvation docking, and MM-PB/SA)

RN 146656-78-2 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl-7-methoxy-3-methyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

applicant

L4 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:267338 CAPLUS
DOCUMENT NUMBER: 140:303707
TITLE: Preparation of 9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine derivatives as tetracyclic non-nucleoside reverse transcriptase inhibitors useful against wild type and double-mutation K103N/Y181C enzymes
INVENTOR(S): Yoakim, Christiane; O'Meara, Jeffrey; Simoneau, Bruno; Ogilvie, William W.; Deziel, Robert
PATENT ASSIGNEE(S): Boehringer Ingelheim (Canada) Ltd., Can.
SOURCE: PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004026875	A1	20040401	WO 2003-CA1410	20030915
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2495744	AA	20040401	CA 2003-2495744	20030915
US 2004132723	A1	20040708	US 2003-662606	20030915
EP 1543006	A1	20050622	EP 2003-750192	20030915
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				

PRIORITY APPLN. INFO.: US 2002-411745P P 20020919
WO 2003-CA1410 W 20030915

OTHER SOURCE(S): MARPAT 140:303707
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compds. I are disclosed [wherein: R1 = H, halogen, (C1-4)alkyl, O(C1-4)alkyl, and haloalkyl; R2 = H or Me; R3 = H or (C1-4)alkyl; R4 = H or (C1-4)alkyl; R5 = (C1-4)alkyl, (C1-4)alkyl(C3-7)cycloalkyl, or (C3-7)cycloalkyl; W = benzo-fused 5- or 6-membered heterocycle having one or two N and/or S atoms; W = Ph, 1,1'-biphenyl, 2,3-dihydro-1H-indene, 1,2,3,4-tetrahydronaphthyl, or naphthyl; W being optionally substituted with (C1-4)alkyl, which in turn can be optionally substituted with a carboxy or (C1-4)alkoxycarbonyl; or a salt or ester thereof]. The compds. have inhibitory activity against wild type (WT), single-mutant, and double-mutant strains of HIV, and are particularly potent against WT and double-mutant K103N/Y181C strains of HIV-1 reverse transcriptase (RT). Over 20 compds. I were prepared and tested. For instance, the thione intermediate II was prepared in 8 steps from 2-chloro-3-nitropyridine and 5-bromo-2-chloro-3-pyridinecarbonyl chloride. Cyclocondensation of the

thioamide function of II with aminoacetaldehyde di-Me acetal to form an imidazole fusion, followed by deprotection, etherification with a carboxy-protected hydroxybiphenylacetic acid derivative, and deprotection, gave title compound III. In assays for inhibition of RT, III had IC50 values of <50 nM for both WT and K103N/Y181C strains of RT. In a cell-based assay against WT HIV-1, III had an EC50 of <10 nM.

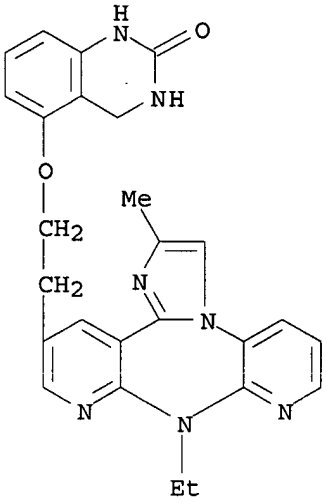
IT **676542-97-5P**, 9-Ethyl-2-methyl-12-[2-[(2-oxo-1,2,3,4-tetrahydroquinazolin-5-yl)oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676542-99-7P**, 9-Ethyl-3-methyl-12-[2-[(1-methyl-2,2-dioxo-1,2-dihydro-2,1-benzothiazin-5-yl)oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-00-3P**, 9-Ethyl-2-methyl-12-[2-[(1-oxo-1,3-dihydroisoindol-4-yl)oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-01-4P**, 9-Ethyl-3-methyl-12-[2-[(2,2-dioxo-1,2,3,4-tetrahydro-2,1-benzothiazin-5-yl)oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-02-5P**, 9-Ethyl-3-methyl-12-[2-[(1,1-dioxo-2,3-dihydro-1,2-benzothiazol-4-yl)oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-03-6P**, 9-Ethyl-3-methyl-12-[2-[(2-oxo-1,4-dihydro-3,1-benzoxazin-5-yl)oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-04-7P**, 9-Ethyl-5-methyl-12-[2-[(1,1-dioxo-3,3-dimethyl-2,3-dihydro-1,2-benzothiazol-5-yl)oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-05-8P**, 9-Ethyl-5-methyl-12-[2-[(2-oxo-1,2,3,4-tetrahydroquinazolin-5-yl)oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-06-9P**, 9-Ethyl-12-[2-[(2-oxo-1,2,3,4-tetrahydroquinazolin-5-yl)oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-07-0P**, 9-Ethyl-3-methyl-12-[2-[(1,2,3,4-tetrahydro-1-oxo-5-isoquinolinyl)oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-08-1P**, 9-Ethyl-3-methyl-12-[2-[(1,3-dimethyl-2-oxo-1,2,3,4-tetrahydroquinazolin-5-yl)oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-09-2P**, 9-Ethyl-5-methyl-12-[2-[[1-(ethoxycarbonyl)-2,2-dioxo-1,3-dihydro-2,1-benzothiazol-4-yl]oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-10-5P**, 9-Ethyl-5-methyl-12-[2-[(2,2-dioxo-1,3-dihydro-2,1-benzothiazol-4-yl)oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-11-6P**, 9-Ethyl-5-methyl-12-[2-[[1-[(tert-butoxycarbonyl)methyl]-2,2-dioxo-1,3-dihydro-2,1-benzothiazol-4-yl]oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-12-7P**, 9-Ethyl-5-methyl-12-[2-[[1-(carboxymethyl)-2,2-dioxo-1,3-dihydro-2,1-benzothiazol-4-yl]oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-13-8P**, 9-Ethyl-3-methyl-12-[2-[[1-[(1-oxopyridin-4-yl)methyl]-2,2-dioxo-1,3-dihydro-2,1-benzothiazol-4-yl]oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-14-9P**, 9-Ethyl-12-[2-[(4-carboxy-2-methylphenyl)oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-15-0P**, 9-Ethyl-3-methyl-12-[2-[(4-carboxy-2-methylphenyl)oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-16-1P**, 4'-[2-(9-Ethyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-3'-methyl-[1,1'-biphenyl]-4-acetic acid **676543-17-2P**, 4'-[2-(9-Ethyl-3-methyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-3'-methyl-[1,1'-biphenyl]-4-acetic acid **676543-18-3P**, 9-Ethyl-3-methyl-12-[2-[(4-carboxy-5,6,7,8-tetrahydronaphthalen-1-yl)oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-19-4P**, 9-Ethyl-3-methyl-12-[2-[(4-carboxynaphthalen-1-yl)oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of imidazodipyridodiazepine derivs. as non-nucleoside reverse transcriptase inhibitors useful against wild type and double-mutation K103N/Y181C enzymes)

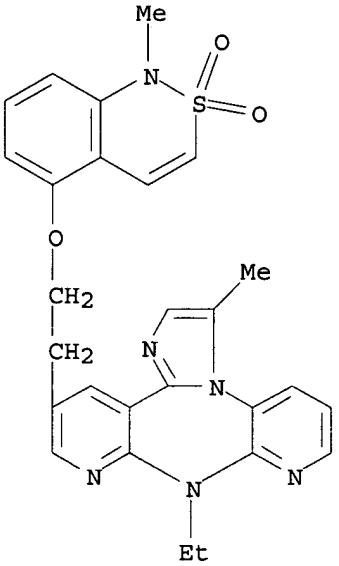
RN 676542-97-5 CAPLUS

CN 2(1H)-Quinazolinone, 5-[2-(9-ethyl-2-methyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-3,4-dihydro- (9CI) (CA INDEX NAME)



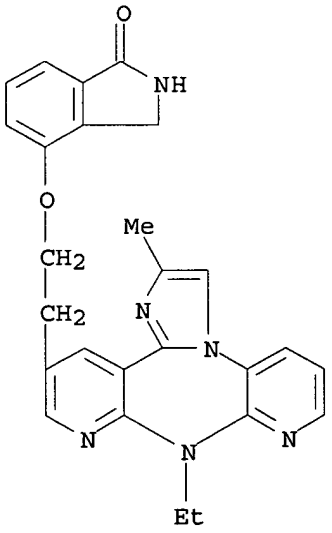
RN 676542-99-7 CAPLUS

CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl-3-methyl-12-[2-[(1-methyl-2,2-dioxido-1H-2,1-benzothiazin-5-yl)oxy]ethyl]- (9CI) (CA INDEX NAME)

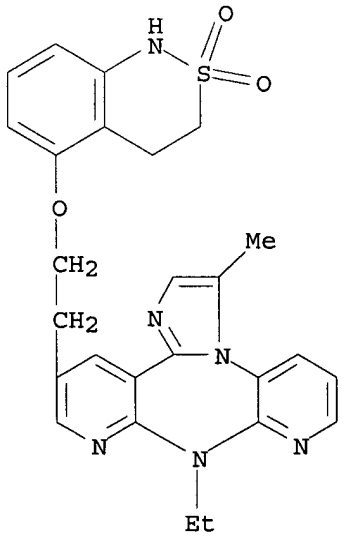


RN 676543-00-3 CAPLUS

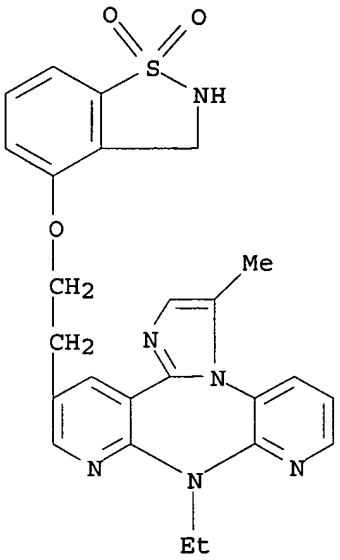
CN 1H-Isoindol-1-one, 4-[2-(9-ethyl-2-methyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-2,3-dihydro- (9CI) (CA INDEX NAME)



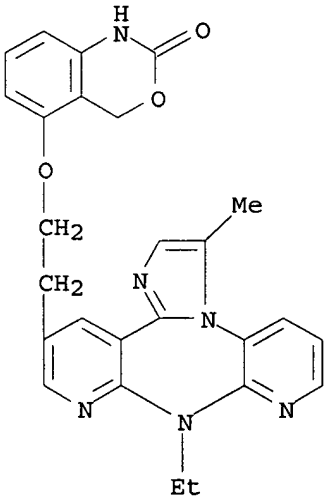
RN 676543-01-4 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 12-[2-[(3,4-dihydro-2,2-dioxido-1H-2,1-benzothiazin-5-yl)oxy]ethyl]-9-ethyl-3-methyl- (9CI) (CA INDEX NAME)



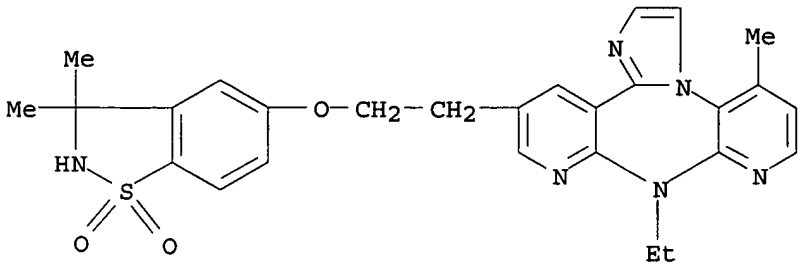
RN 676543-02-5 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 12-[2-[(2,3-dihydro-1,1-dioxido-1,2-benzisothiazol-4-yl)oxy]ethyl]-9-ethyl-3-methyl- (9CI) (CA INDEX NAME)



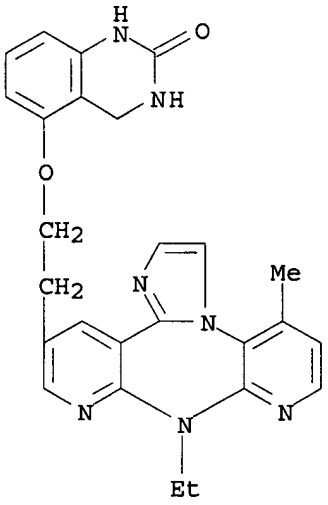
RN 676543-03-6 CAPLUS
CN 2H-3,1-Benzoxazin-2-one, 5-[2-(9-ethyl-3-methyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-1,4-dihydro- (9CI) (CA INDEX NAME)



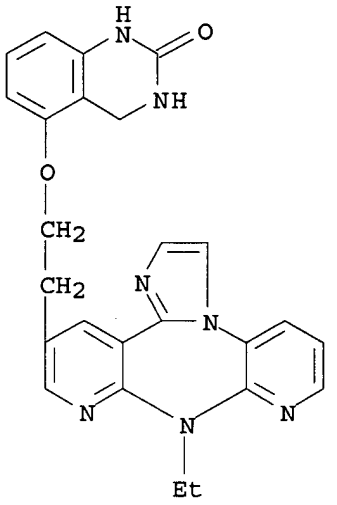
RN 676543-04-7 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 12-[2-[(2,3-dihydro-3,3-dimethyl-1,1-dioxido-1,2-benzisothiazol-5-yl)oxy]ethyl]-9-ethyl-5-methyl- (9CI) (CA INDEX NAME)



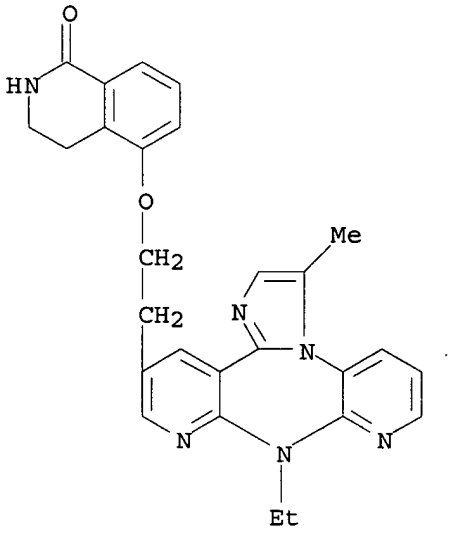
RN 676543-05-8 CAPLUS
CN 2(1H)-Quinazolinone, 5-[2-(9-ethyl-5-methyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-3,4-dihydro- (9CI) (CA INDEX NAME)



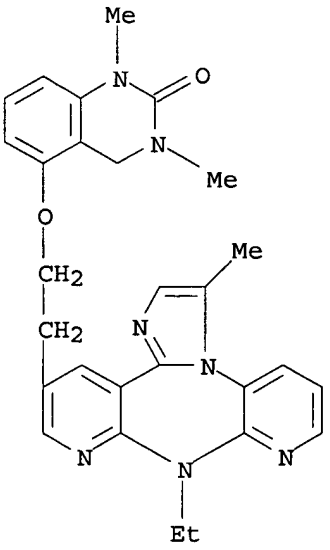
RN 676543-06-9 CAPLUS
CN 2(1H)-Quinazolinone, 5-[2-(9-ethyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-3,4-dihydro- (9CI) (CA INDEX NAME)



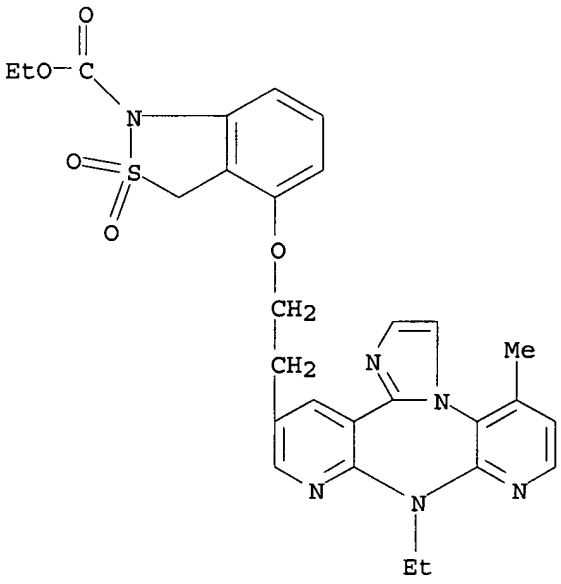
RN 676543-07-0 CAPLUS
CN 1(2H)-Isoquinolinone, 5-[2-(9-ethyl-3-methyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-3,4-dihydro- (9CI) (CA INDEX NAME)



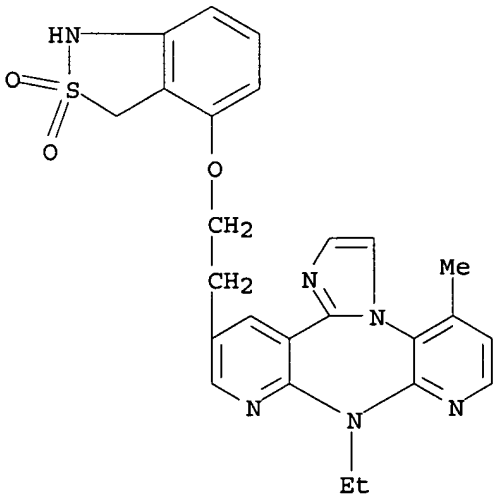
RN 676543-08-1 CAPLUS
CN 2(1H)-Quinazolinone, 5-[2-(9-ethyl-3-methyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-3,4-dihydro-1,3-dimethyl- (9CI) (CA INDEX NAME)



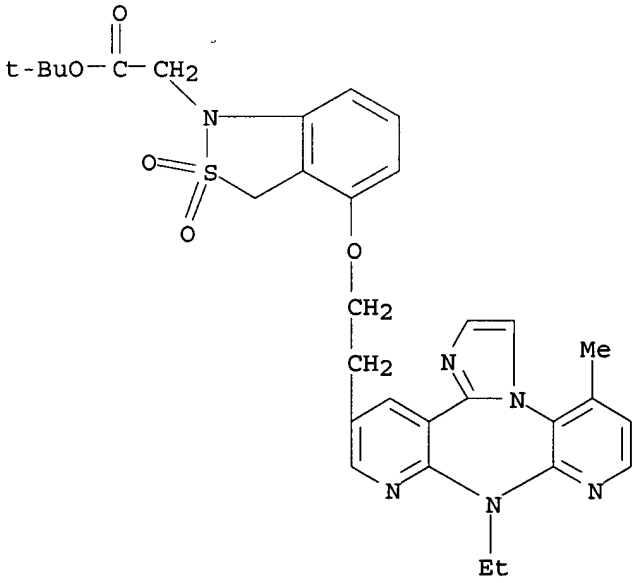
RN 676543-09-2 CAPLUS
CN 2,1-Benzisothiazole-1(3H)-carboxylic acid, 4-[2-(9-ethyl-5-methyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-, ethyl ester, 2,2-dioxide (9CI) (CA INDEX NAME)



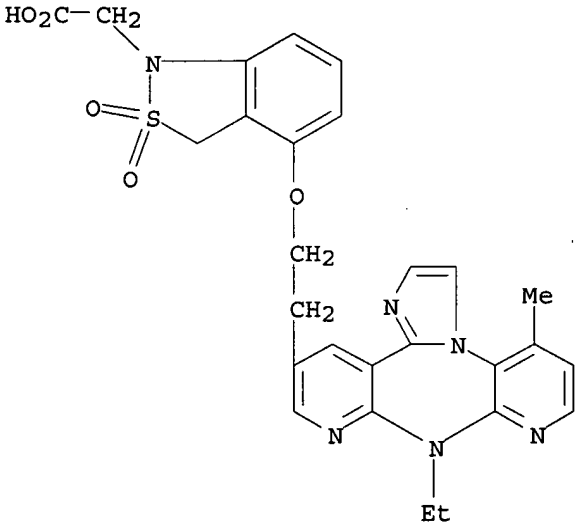
RN 676543-10-5 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 12-[2-[(1,3-dihydro-2,2-dioxido-2,1-benzisothiazol-4-yl)oxy]ethyl]-9-ethyl-5-methyl- (9CI) (CA INDEX NAME)



RN 676543-11-6 CAPLUS
CN 2,1-Benzisothiazole-1(3H)-acetic acid, 4-[2-(9-ethyl-5-methyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-, 1,1-dimethylethyl ester, 2,2-dioxide (9CI) (CA INDEX NAME)

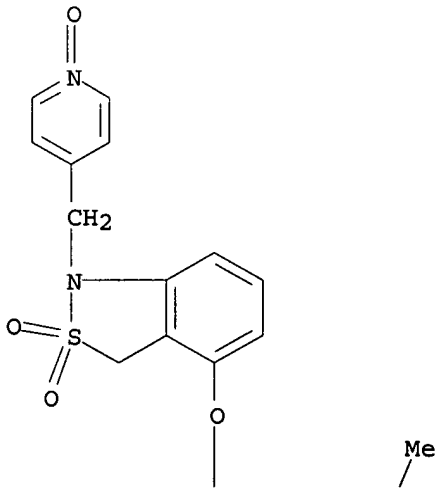


RN 676543-12-7 CAPLUS
CN 2,1-Benzisothiazole-1(3H)-acetic acid, 4-[2-(9-ethyl-5-methyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-, 2,2-dioxide (9CI) (CA INDEX NAME)

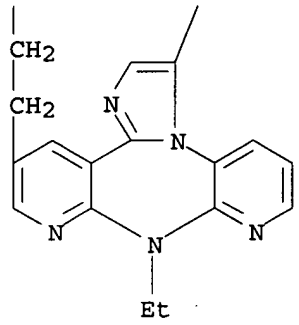


RN 676543-13-8 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 12-[2-[[1,3-dihydro-2,2-dioxido-1-[(1-oxido-4-pyridinyl)methyl]-2,1-benzisothiazol-4-yl]oxy]ethyl]-9-ethyl-3-methyl- (9CI) (CA INDEX NAME)

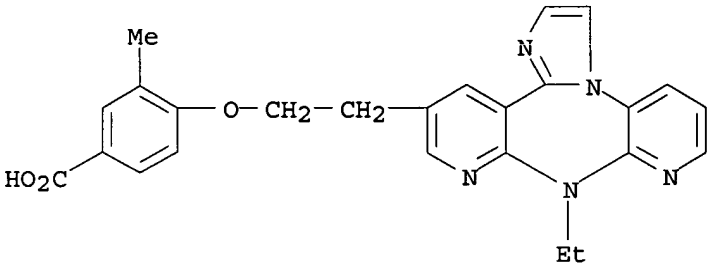
PAGE 1-A



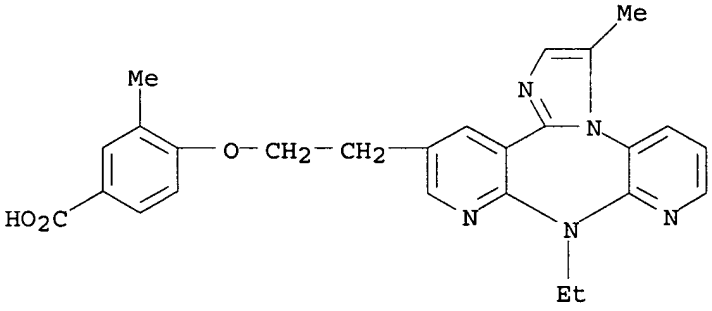
PAGE 2-A



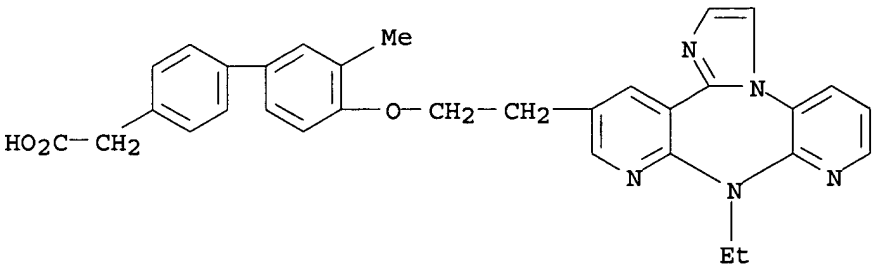
RN 676543-14-9 CAPLUS
CN Benzoic acid, 4-[2-(9-ethyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-3-methyl- (9CI) (CA INDEX NAME)



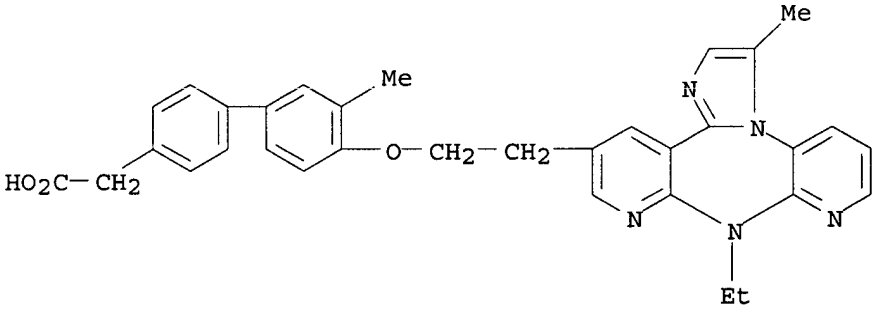
RN 676543-15-0 CAPLUS
CN Benzoic acid, 4-[2-(9-ethyl-3-methyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-3-methyl- (9CI) (CA INDEX NAME)



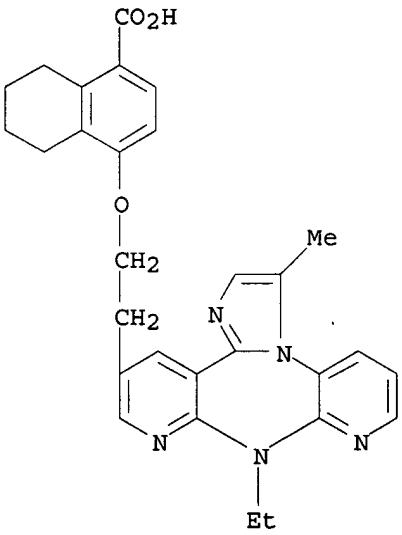
RN 676543-16-1 CAPLUS
CN [1,1'-Biphenyl]-4-acetic acid, 4'-[2-(9-ethyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-3'-methyl- (9CI) (CA INDEX NAME)



RN 676543-17-2 CAPLUS
CN [1,1'-Biphenyl]-4-acetic acid, 4'-[2-(9-ethyl-3-methyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-3'-methyl- (9CI) (CA INDEX NAME)

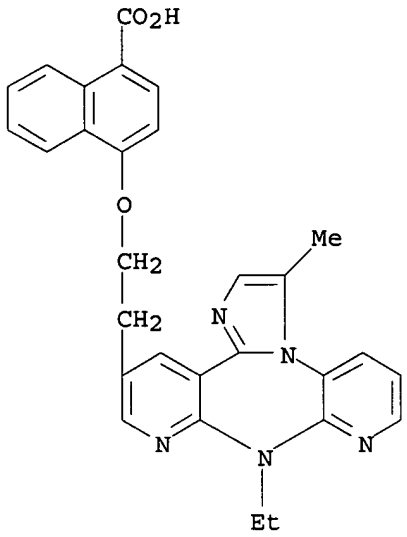


RN 676543-18-3 CAPLUS
CN 1-Naphthalenecarboxylic acid, 4-[2-(9-ethyl-3-methyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-5,6,7,8-tetrahydro- (9CI) (CA INDEX NAME)



RN 676543-19-4 CAPLUS
CN 1-Naphthalenecarboxylic acid, 4-[2-(9-ethyl-3-methyl-9H-imidazo[1,2-

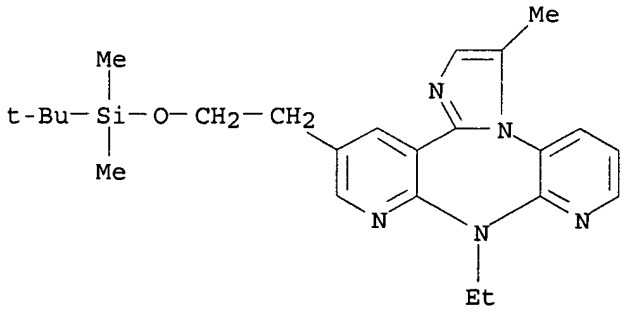
d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]- (9CI) (CA INDEX NAME)



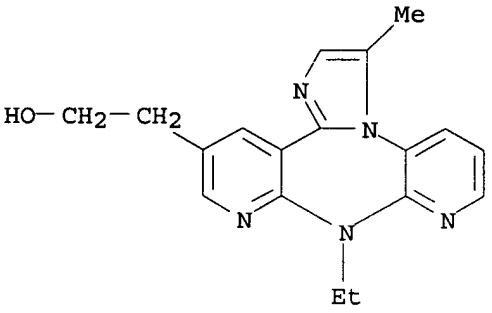
IT **676543-24-1P**, 9-Ethyl-3-methyl-12-[2-[(tert-butyldimethylsilyl)oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-25-2P**, 9-Ethyl-3-methyl-12-(2-hydroxyethyl)-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-26-3P**, 2-(9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethanol **676543-29-6P**, 4'-[2-(9-Ethyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-3'-methyl-[1,1'-biphenyl]-4-acetic acid methyl ester **676543-30-9P**, 9-Ethyl-2-methyl-12-(2-hydroxyethyl)-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-35-4P**, 9-Ethyl-3-methyl-12-[2-[4-(methoxycarbonyl)-2-methylphenoxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-41-2P**, 9-Ethyl-3-methyl-12-[2-[[2-(ethoxycarbonyl)-1,1-dioxo-2,3-dihydro-1,2-benzothiazol-4-yl]oxy]ethyl]-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine **676543-68-3P**, 9-Ethyl-5-methyl-12-(2-hydroxyethyl)-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of imidazodipyridodiazepine derivs. as non-nucleoside reverse transcriptase inhibitors useful against wild type and double-mutation K103N/Y181C enzymes)

RN 676543-24-1 CAPLUS

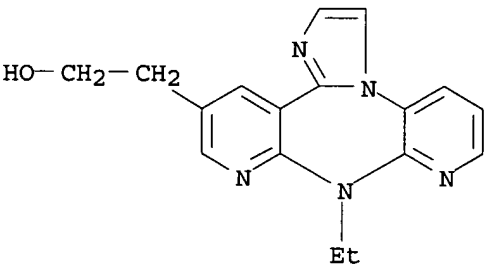
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 12-[2-[[(1,1-dimethylethyl)dimethylsilyl]oxy]ethyl]-9-ethyl-3-methyl- (9CI) (CA INDEX NAME)



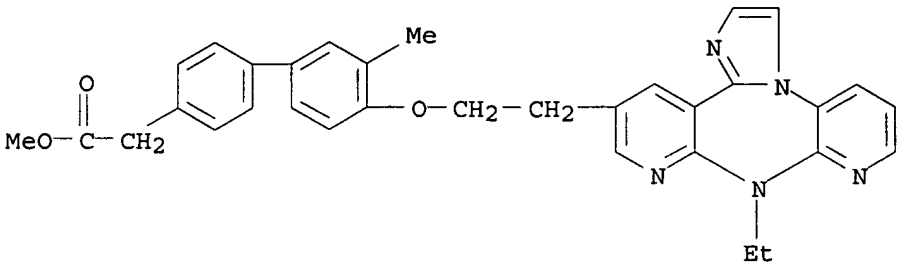
RN 676543-25-2 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine-12-ethanol, 9-ethyl-3-methyl- (9CI) (CA INDEX NAME)



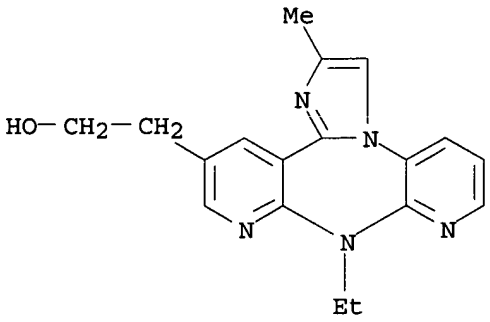
RN 676543-26-3 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine-12-ethanol, 9-ethyl- (9CI) (CA INDEX NAME)



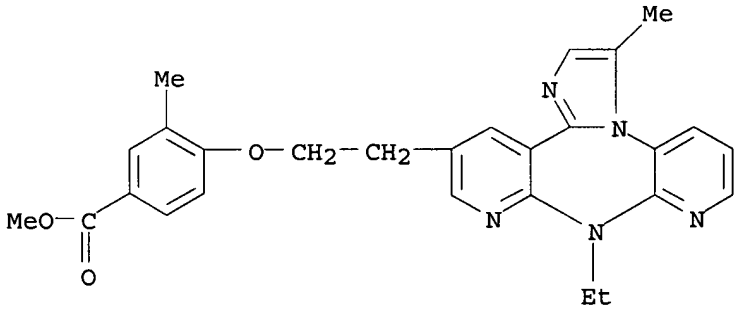
RN 676543-29-6 CAPLUS
CN [1,1'-Biphenyl]-4-acetic acid, 4'-[2-(9-ethyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-3'-methyl-, methyl ester (9CI) (CA INDEX NAME)



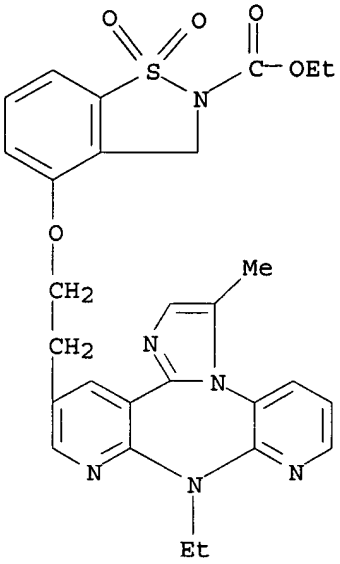
RN 676543-30-9 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine-12-ethanol, 9-ethyl-2-methyl- (9CI) (CA INDEX NAME)



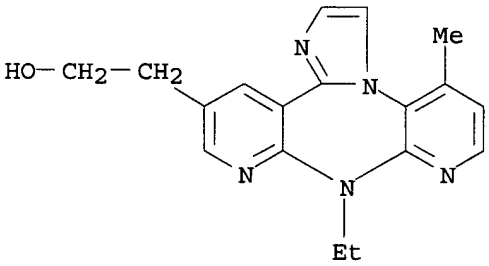
RN 676543-35-4 CAPLUS
CN Benzoic acid, 4-[2-(9-ethyl-3-methyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-3-methyl-, methyl ester (9CI) (CA INDEX NAME)



RN 676543-41-2 CAPLUS
CN 1,2-Benzisothiazole-2(3H)-carboxylic acid, 4-[2-(9-ethyl-3-methyl-9H-imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-12-yl)ethoxy]-, ethyl ester, 1,1-dioxide (9CI) (CA INDEX NAME)



RN 676543-68-3 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine-12-ethanol, 9-ethyl-5-methyl- (9CI) (CA INDEX NAME)



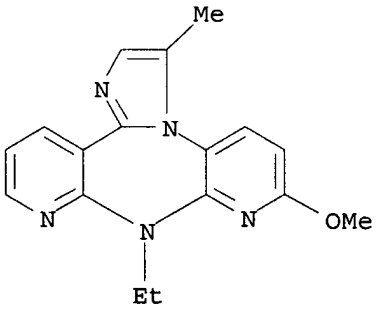
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:136159 CAPLUS
DOCUMENT NUMBER: 140:385502
TITLE: A multivariate analysis on non-nucleoside HIV-1 reverse transcriptase inhibitors and resistance induced by mutation
AUTHOR(S): Almerico, Anna Maria; Lauria, Antonino; Tutone, Marco; Diana, Patrizia; Barraja, Paola; Montalbano, Alessandra; Cirrincione, Girolamo; Dattolo, Gaetano
CORPORATE SOURCE: Dipartimento Farmacochimico, Tossicologico e Biologico, Universita degli Studi, Palermo, 90123, Italy
SOURCE: QSAR & Combinatorial Science (2003), Volume Date 2004, 22(9-10), 984-996
CODEN: QCSSAU; ISSN: 1611-020X
PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English

AB This paper describes the use of multivariate statistical procedure PCA as a tool to explore the inhibitory activity of classes of NNRTIs against HIV-1 viruses (wild type and more frequent mutants, Y181C, V106A, K103N, L100I) and against RT enzyme. The anal. of correlations between biol. activity and mol. descriptors or similarity indexes allowed a reliable classification of the fifty five derivs. considered in this study. The best results were obtained in the case of L100I and K103N mutants for which the higher number of assignments was found when the principal components derived from the descriptors were used. On this basis this statistical approach is proposed as a reliable method for the prediction of the activity of NNRTIs, for which the data against mutant strains have not been reported.

IT **146656-78-2**, Uk-129485
RL: CST (Combinatorial study, unclassified); PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); CMBI (Combinatorial study); USES (Uses)
(multivariate anal. on non-nucleoside HIV-1 reverse transcriptase inhibitors and resistance induced by mutation)

RN 146656-78-2 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl-7-methoxy-3-methyl- (9CI) (CA INDEX NAME)

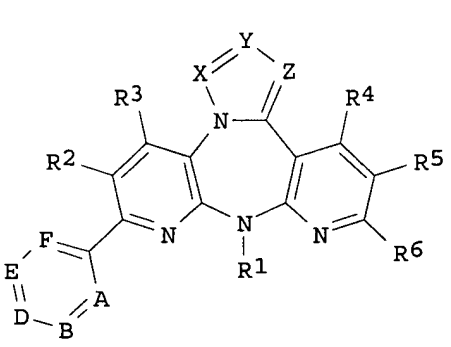


REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

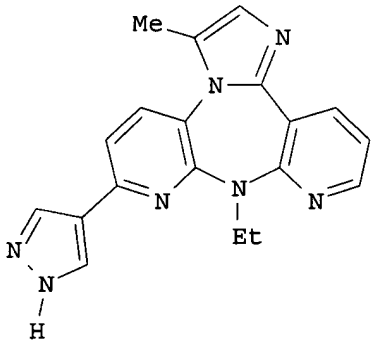
L4 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:282400 CAPLUS
DOCUMENT NUMBER: 128:321663
TITLE: Preparation of 2-aryl-5,11-dihydro-6H-dipyrido[3,2-b:2',3'-e][1,4]diazepines for treating HIV infection
INVENTOR(S): Hargrave, Karl D.; Proudfoot, John R.
PATENT ASSIGNEE(S): Boehringer Ingelheim Pharmaceuticals, Inc., USA
SOURCE: U.S., 10 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5747488	A	19980505	US 1996-769081	19961218

PRIORITY APPLN. INFO.: US 1996-769081 19961218
OTHER SOURCE(S): MARPAT 128:321663
GI



I

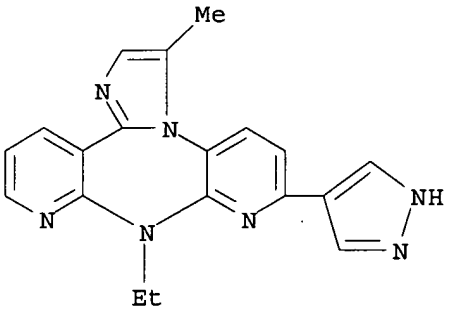


II

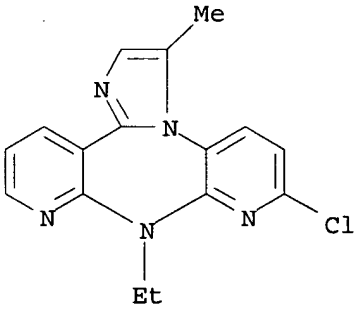
AB The title compds. [I; A, B, D, E, F form a 6-membered aromatic ring and A-F = C, N; X = N, CH, C(halo), etc.; Y, Z = N, CH, C(Me), C(Et); R1 = H, C1-6 alkyl, C3-6 cycloalkyl, etc.; one of R2 or R3 = C1-6 alkyl, C2-6 alkenyl, C3-6 cycloalkyl, etc., and the other = H, Me, halo; R2R3 are joined to form a cycloalkyl with 3-4 carbon bridge; R2, R3 = H; one of R4-R6 = C1-4 alkyl, C2-4 alkenyl, C2-4 alkynyl, etc., and the other = H; two of R4-R6 = C1-2 alkyl, trihalomethyl, C1-2 alkyloxy, etc., and the other = H; R4-R6 = H], useful in the treatment of HIV infection, were prepared and formulated. Thus, treatment of 2-chloro-5,11-dihydro-11-ethyl-6H-dipyrido[3,2-b:2',3'-e][1,4]diazepine-6-thione with propargylamine in BuOH followed by reaction of the resulting 10-chloro-8-ethyl-1-methylimidazo[2',3':6,5]dipyrido[3,2-b:2',3'-e][1,4]diazepine with 4-(tributylstannyl)pyrazole in the presence of PdCl2(PPh3)2 and LiCl in DMF afforded the title compound II. which showed CC50 of > 100 μM in MIT assay. Other exemplary compds. are: 8-c-propyl-1-methyl-10-(4-pyrazolyl)imidazo[2',3':6,5]dipyrido[3,2-b:2',3'-e][1,4]diazepine, 8-ethyl-12-methyl-10-(4-pyrazolyl)imidazo[2',3':6,5]dipyrido[3,2-b:2',3'-e][1,4]diazepine, and 8-c-propyl-12-methyl-10-(4-pyrazolyl)imidazo[2',3':6,5]dipyrido[3,2-b:2',3'-e][1,4]diazepine.

IT **195626-37-0P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of 2-aryl-5,11-dihydro-6H-dipyrido[3,2-b:2',3'-

e][1,4]diazepines for treating HIV infection)
RN 195626-37-0 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl-3-methyl-7-(1H-pyrazol-4-yl)- (9CI) (CA INDEX NAME)



IT **195626-41-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of 2-aryl-5,11-dihydro-6H-dipyrido[3,2-b:2',3'-e][1,4]diazepines for treating HIV infection)
RN 195626-41-6 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 7-chloro-9-ethyl-3-methyl- (9CI) (CA INDEX NAME)

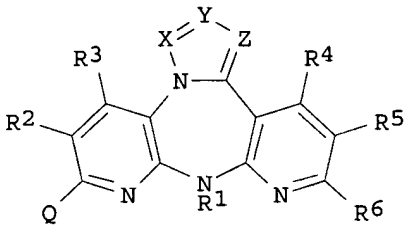


REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:592214 CAPLUS
DOCUMENT NUMBER: 127:248111
TITLE: Preparation of 2-aryl-5,11-dihydro-6H-dipyrido[3,2-b:2',3'-e][1,4]diazepines for the treatment of HIV infection.
INVENTOR(S): Hargrave, Karl D.; Proudfoot, John R.
PATENT ASSIGNEE(S): Boehringer Ingelheim Pharmaceuticals Inc., USA
SOURCE: Eur. Pat. Appl., 21 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 791594	A2	19970827	EP 1997-101195	19970127
EP 791594	A3	19970910		
R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
CA 2196136	AA	19970731	CA 1997-2196136	19970128
JP 09301976	A2	19971125	JP 1997-15180	19970129
PRIORITY APPLN. INFO.:			US 1996-10827P P	19960130
OTHER SOURCE(S):	MARPAT 127:248111			

GI



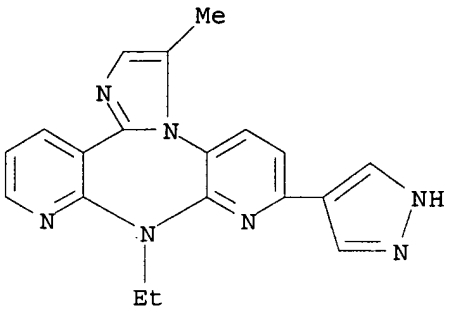
I

AB Title compds. [I; Q = atoms to form a (substituted) 5-6-membered (hetero)cyclyl; X, Y, Z = atoms to form a (substituted) ring; R1 = H, alkyl, fluoroalkyl, cycloalkyl, oxetanyl, thietanyl, tetrahydrofuryl, tetrahydrothienyl, alkenylmethyl, alkynylmethyl, alkanoyl, thioalkanoyl, alkoxyalkyl, alkylthioalkyl, hydroxyalkyl, etc.; R2, R3 = H; R2R3 = atoms to form a 3-4 C atom bridge; R4, R5, R6 = H, trihalomethyl, alkoxy, alkylthio, halo, hydroxyalkyl, alkoxyalkyl, alkylthioalkyl, alkoxycarbonylalkyl, etc.], were prepared Thus, 10-chloro-8-ethyl-1-methylimidazo[2',3':6,5]dipyrido[3,2-b:2',3-e]diazepine was heated with 5-tributylstannylpyrazole, LiCl, and Pd(PPh3)2Cl2 in DMF in a sealed tube at 120° for 16 h to give 8-ethyl-1-methyl-10-(4-pyrazolyl)imidazo[2',3',6,5]dipyrido[3,2-b:2',3'-e][1,4]diazepine. The latter inhibited HIV-1 reverse transcriptase by 95% at 1 μM.

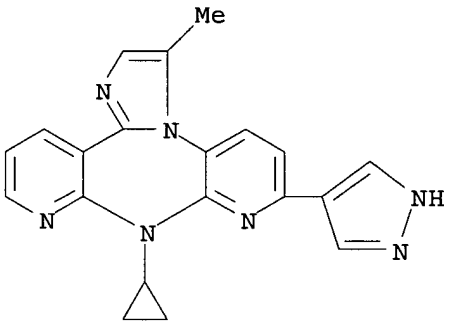
IT **195626-37-0P 195626-38-1P 195626-39-2P**
195626-40-5P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of aryldihydrodipyridodiazepines for the treatment of HIV infection)

RN 195626-37-0 CAPLUS

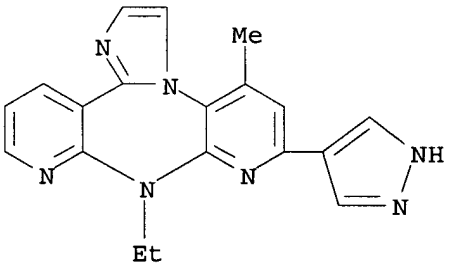
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine,
9-ethyl-3-methyl-7-(1H-pyrazol-4-yl)- (9CI) (CA INDEX NAME)



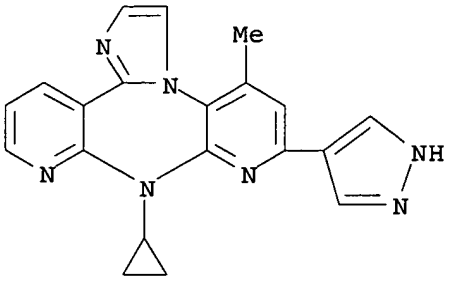
RN 195626-38-1 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine,
9-cyclopropyl-3-methyl-7-(1H-pyrazol-4-yl)- (9CI) (CA INDEX NAME)



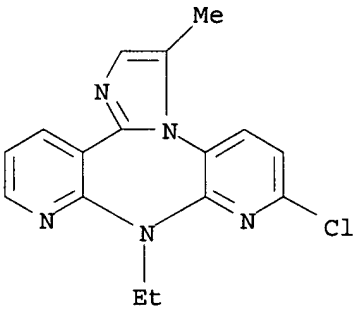
RN 195626-39-2 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine,
9-ethyl-5-methyl-7-(1H-pyrazol-4-yl)- (9CI) (CA INDEX NAME)



RN 195626-40-5 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine,
9-cyclopropyl-5-methyl-7-(1H-pyrazol-4-yl)- (9CI) (CA INDEX NAME)



IT **195626-41-6**
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of aryldihydrodipyridodiazepines for the treatment of HIV infection)
RN 195626-41-6 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 7-chloro-9-ethyl-3-methyl- (9CI) (CA INDEX NAME)

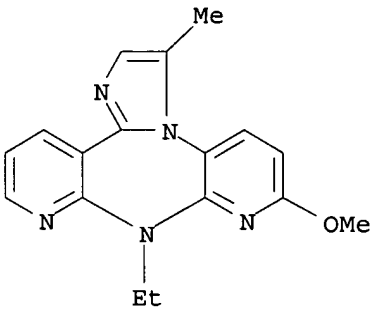


L4 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1997:75394 CAPLUS
DOCUMENT NUMBER: 126:182993
TITLE: Evidence of a butterfly-like configuration of structurally diverse allosteric inhibitors of the HIV-1 reverse transcriptase
AUTHOR(S): Mager, Peter P.
CORPORATE SOURCE: Research Group of Pharmacochemistry, Institute of Pharmacology and Toxicology of the University, Leipzig, D-04107, Germany
SOURCE: Drug Design and Discovery (1996), 14(3), 241-257
CODEN: DDDIEV; ISSN: 1055-9612
PUBLISHER: Harwood
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Although many physicochem. properties of chemical diverse non-nucleoside inhibitors of HIV-1 reverse transcriptase (NNRTIs) differ, there is a common three-dimensional feature. This shape is a rigid butterfly-like configuration which fits well into a sizable internal cavity of the allosteric area of the enzyme. The number of amino acids of the allosteric receptor sites that contribute to NNRTIs binding correlates with the degree of the butterfly-like shape. It seems that mol. rigidity of the butterfly-like shape, the drug affinity and the probability of resistance development are closely related.

IT **146656-78-2**, DIAZEP
RL: BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(evidence of a butterfly-like configuration of structurally diverse allosteric inhibitors of the HIV-1 reverse transcriptase)

RN 146656-78-2 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl-7-methoxy-3-methyl- (9CI) (CA INDEX NAME)

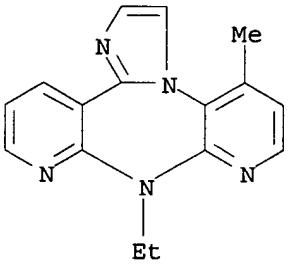


L4 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1996:175901 CAPLUS
DOCUMENT NUMBER: 124:249668
TITLE: All-Atom Models for the Non-Nucleoside Binding Site of HIV-1 Reverse Transcriptase Complexed with Inhibitors: A 3D QSAR Approach
AUTHOR(S): Gussio, Rick; Pattabiraman, Nagarajan; Zaharevitz, Daniel W.; Kellogg, Glen E.; Topol, Igor A.; Rice, William G.; Schaeffer, Catherine A.; Erickson, John W.; Burt, Stanley K.
CORPORATE SOURCE: Structural Biochemistry Program, Frederick Biomedical Supercomputing Center, Frederick, MD, 21702, USA
SOURCE: Journal of Medicinal Chemistry (1996), 39(8), 1645-50
CODEN: JMCMAR; ISSN: 0022-2623
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

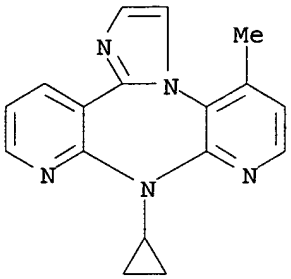
AB Several mol. modeling techniques were used to generate an all-atom mol. model of a receptor binding site starting only from Ca atom coordinates. The model consists of 48 noncontiguous residues of the non-nucleoside binding site of HIV-1 reverse transcriptase and was generated using a congeneric series of nevirapine analogs as structural probes. On the basis of the receptor-ligand atom contacts, the program HINT was used to develop a 3-dimensional (3D) QSAR that predicted the rank order of binding affinities for the series of inhibitors. Electronic profiles of the ligands in their docked conformations were characterized using electrostatic potential maps and frontier orbital calcns. These results led to the development of a 3D stereoelectronic pharmacophore which was used to construct 3D queries for database searches. A search of the National Cancer Institute's open database identified a lead compound that exhibited moderate antiviral activity.

IT **146656-71-5 146656-72-6 146656-74-8**
146656-76-0 146656-77-1 146656-78-2, UK 129485
146656-80-6 146656-82-8 146656-84-0
175235-40-2 175235-41-3
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study); PROC (Process)
(models for nonnucleoside binding site of HIV-1 reverse transcriptase complex with inhibitors)

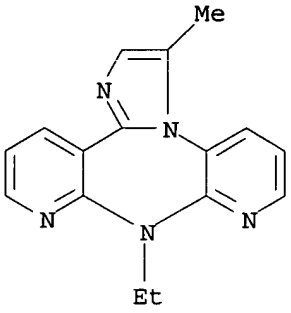
RN 146656-71-5 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl-5-methyl- (9CI) (CA INDEX NAME)



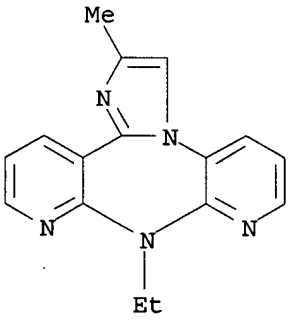
RN 146656-72-6 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-cyclopropyl-5-methyl- (9CI) (CA INDEX NAME)



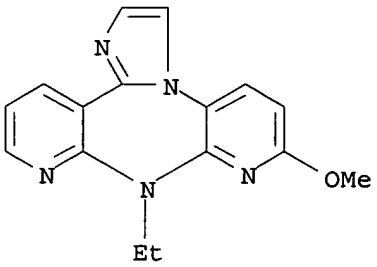
RN 146656-74-8 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl-3-methyl- (9CI) (CA INDEX NAME)



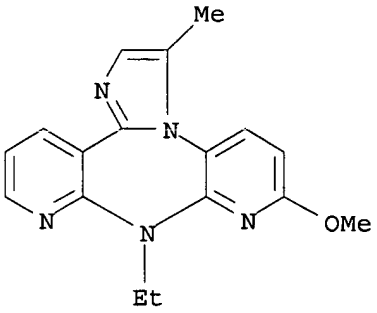
RN 146656-76-0 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl-2-methyl- (9CI) (CA INDEX NAME)



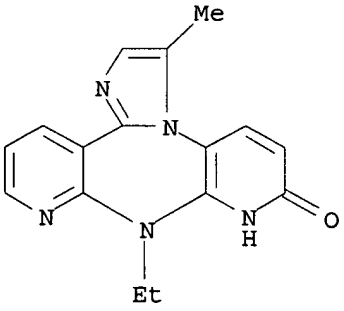
RN 146656-77-1 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl-7-methoxy- (9CI) (CA INDEX NAME)



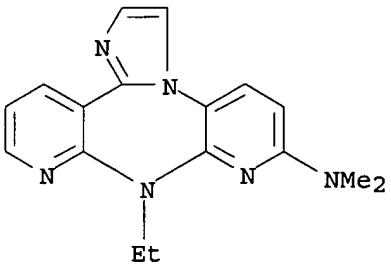
RN 146656-78-2 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl-7-methoxy-3-methyl- (9CI) (CA INDEX NAME)



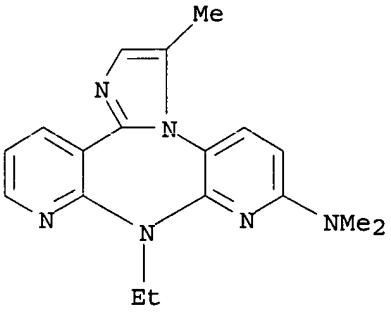
RN 146656-80-6 CAPLUS
CN 8H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-7(9H)-one, 9-ethyl-3-methyl- (9CI) (CA INDEX NAME)



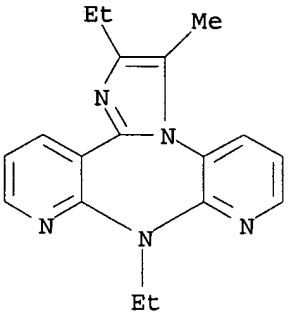
RN 146656-82-8 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-7-amine, 9-ethyl-N,N-dimethyl- (9CI) (CA INDEX NAME)



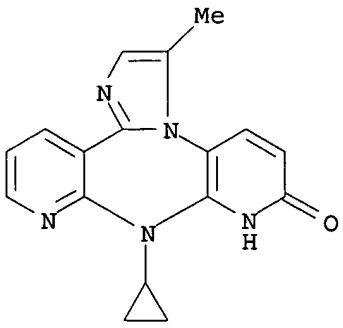
RN 146656-84-0 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-7-amine, 9-ethyl-N,N,3-trimethyl- (9CI) (CA INDEX NAME)



RN 175235-40-2 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 2,9-diethyl-3-methyl- (9CI) (CA INDEX NAME)



RN 175235-41-3 CAPLUS
CN 8H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-7(9H)-one, 9-cyclopropyl-3-methyl- (9CI) (CA INDEX NAME)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L4 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1994:473861 CAPLUS
DOCUMENT NUMBER: 121:73861
TITLE: Use of bis(heteroaryl)piperazines in combination with other non-nucleoside reverse transcriptase inhibitors for the treatment of HIV infection
INVENTOR(S): Tarpley, William Gary; Dueweke, Thomas Jerome; Batts, Donald Herman M. D.
PATENT ASSIGNEE(S): Upjohn Co., USA
SOURCE: PCT Int. Appl., 72 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

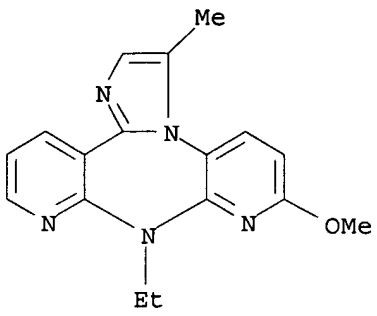
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9409781	A1	19940511	WO 1993-US8354	19930910
W: AT, AU, BB, BG, BR, BY, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, LV, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, US, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2145545	AA	19940511	CA 1993-2145545	19930910
AU 9348482	A1	19940524	AU 1993-48482	19930910
EP 666744	A1	19950816	EP 1993-921364	19930910
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 08502745	T2	19960326	JP 1994-511044	19930910
HU 72050	A2	19960328	HU 1995-1218	19930910
FI 9502018	A	19950427	FI 1995-2018	19950427
NO 9501608	A	19950628	NO 1995-1608	19950427

PRIORITY APPLN. INFO.: US 1992-967639 A 19921028
US 1993-17119 A 19930212
WO 1993-US8354 W 19930910

AB A HIV-pos. human is treated with a bis(heteroaryl)piperazine to increase the sensitivity to a non-nucleoside HIV treatment drug, followed by a non-nucleoside HIV treatment drug. An alternative method is a concurrent administration of two drugs. For example, a HIV-pos. patient was treated with 1-[2-(5-methoxyindolyl)carbonyl]-4-[3-(N-ethylamino)-2-pyridinyl]piperazine for 3 mo, then with 6,11-dihydro-11-cyclopropyl-4-methyldipyrido[2,3-b:2',3'-e]-[1,4]diazepin-6-one.

IT **146656-78-2**
RL: BIOL (Biological study)
(reverse transcriptase inhibitor, HIV infection treatment with bis(heteroaryl)piperazine and)

RN 146656-78-2 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl-7-methoxy-3-methyl- (9CI) (CA INDEX NAME)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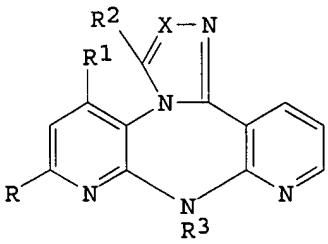
L4 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1993:169080 CAPLUS
DOCUMENT NUMBER: 118:169080
TITLE: Imidazo[2',3':6,5]dipyrido[3,2-b:2',3'-e]-1,4-diazepines: non-nucleoside HIV-1 reverse transcriptase inhibitors with greater enzyme affinity than nevirapine
AUTHOR(S): Terrett, Nicholas K.; Bojanic, Dejan; Merson, James R.; Stephenson, Peter T.
CORPORATE SOURCE: Pfizer Cent. Res., Sandwich/Kent, CT13 9NJ, UK
SOURCE: Bioorganic & Medicinal Chemistry Letters (1992), 2(12), 1745-50
CODEN: BMCLE8; ISSN: 0960-894X
DOCUMENT TYPE: Journal
LANGUAGE: English
GI

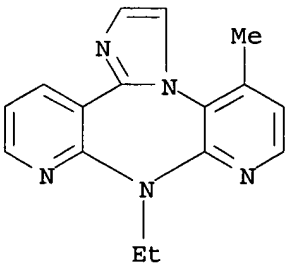


I

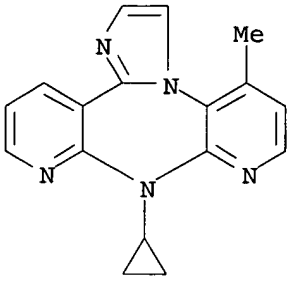
AB The chemical and structure-activity relationship of a new series of imidazo[2',3':6,5]dipyrido[3,2-b:2',3'-e]-1,4-diazepines I (R = H, OMe, OH, NMe2, pyrrolidino; R1 = H, Me; R2 = H, Me, Et, CHMe2, Ph, CH2NMe2; R3 = Et, cyclopropyl; X = N, CH, CMe) is described. These compds. show improved affinity for HIV-1 reverse transcriptase and antiviral activity in vitro over nevirapine, which has undergone clin. trials.

IT **146656-71-5P 146656-72-6P 146656-73-7P**
146656-74-8P 146656-75-9P 146656-76-0P
146656-77-1P 146656-78-2P 146656-79-3P
146656-80-6P 146656-81-7P 146656-82-8P
146656-83-9P 146656-84-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and HIV-1 reverse transcriptase inhibition by)

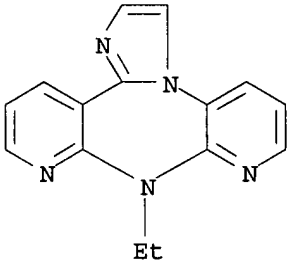
RN 146656-71-5 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl-5-methyl- (9CI) (CA INDEX NAME)



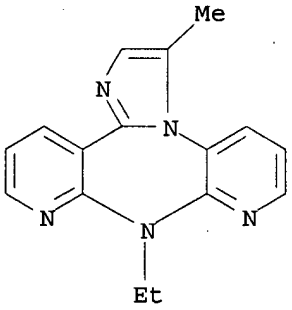
RN 146656-72-6 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-cyclopropyl-5-methyl- (9CI) (CA INDEX NAME)



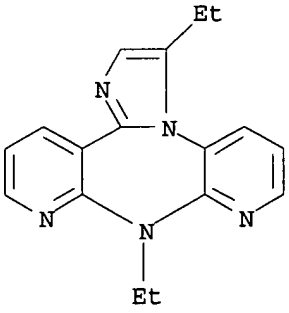
RN 146656-73-7 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl- (9CI) (CA INDEX NAME)



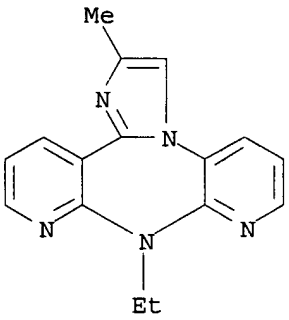
RN 146656-74-8 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl-3-methyl- (9CI) (CA INDEX NAME)



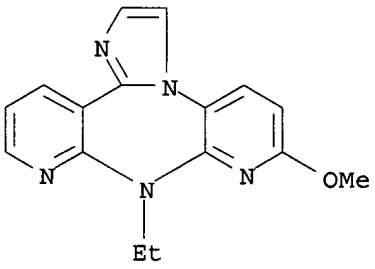
RN 146656-75-9 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 3,9-diethyl- (9CI) (CA INDEX NAME)



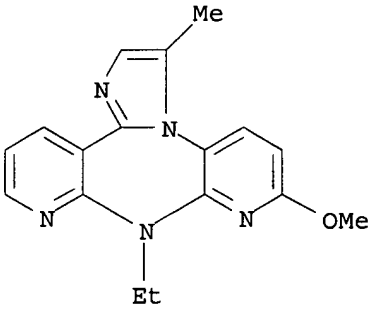
RN 146656-76-0 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl-2-methyl- (9CI) (CA INDEX NAME)



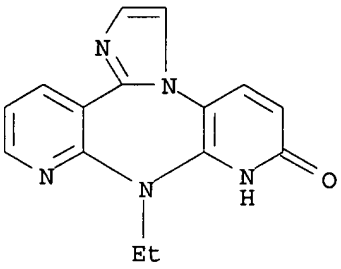
RN 146656-77-1 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl-7-methoxy- (9CI) (CA INDEX NAME)



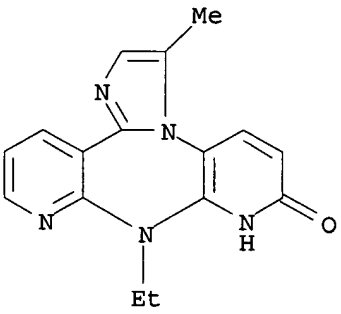
RN 146656-78-2 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl-7-methoxy-3-methyl- (9CI) (CA INDEX NAME)



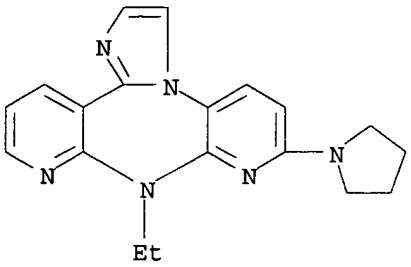
RN 146656-79-3 CAPLUS
CN 8H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-7(9H)-one, 9-ethyl- (9CI) (CA INDEX NAME)



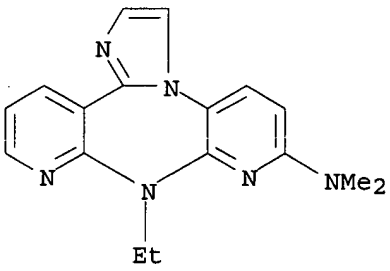
RN 146656-80-6 CAPLUS
CN 8H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-7(9H)-one, 9-ethyl-3-methyl- (9CI) (CA INDEX NAME)



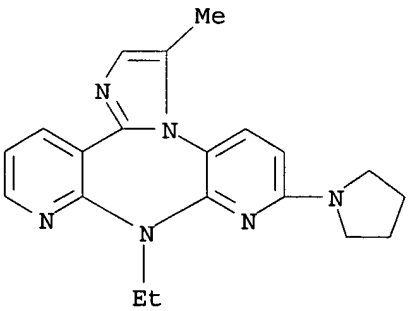
RN 146656-81-7 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl-7-(1-pyrrolidinyl)- (9CI) (CA INDEX NAME)



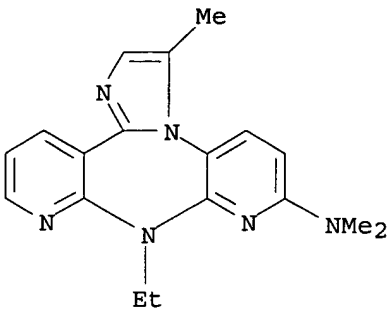
RN 146656-82-8 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-7-amine, 9-ethyl-N,N-dimethyl- (9CI) (CA INDEX NAME)



RN 146656-83-9 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepine, 9-ethyl-3-methyl-7-(1-pyrrolidinyl)- (9CI) (CA INDEX NAME)



RN 146656-84-0 CAPLUS
CN 9H-Imidazo[1,2-d]dipyrido[2,3-b:3',2'-f][1,4]diazepin-7-amine, 9-ethyl-N,N,3-trimethyl- (9CI) (CA INDEX NAME)


Me
N
N
N
N
N
NMe2
Et